



## Mobile Learning Overview

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ADL

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## Let's Look At...

- Mobile Status and Definitions
- Considerations
- Some examples
  - Commercial and Academic
  - Military
- Future Directions
- Discussion and Questions





## CEO Eric Schmidt

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In his Mobile World Congress keynote address, Google CEO Eric Schmidt describes the mobile ecosystem as a confluence of **computing power**, **connectivity** and **cloud computing**, and proclaims a new focus for the industry: putting **mobile first**.



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## Tomi Ahonen Almanac 2010

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- 4.6 billion subscriptions - 68% of planet
- 3.4 billion unique users - half the planet
- 1.2 billion PCs (including notebooks)
- 3x as many camera phones in use today than any kind of stand-alone camera, digital or film-based - ever manufactured
- 1.13 billion handsets sold last year compared to 270 million new PCs
- More internet users on mobile than on personal computers



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## Capabilities Today

- 100% able to receive SMS text messages
- 95% have some kind of browser
- 93% have a color screen
- 73% of all phones in use are cameraphones

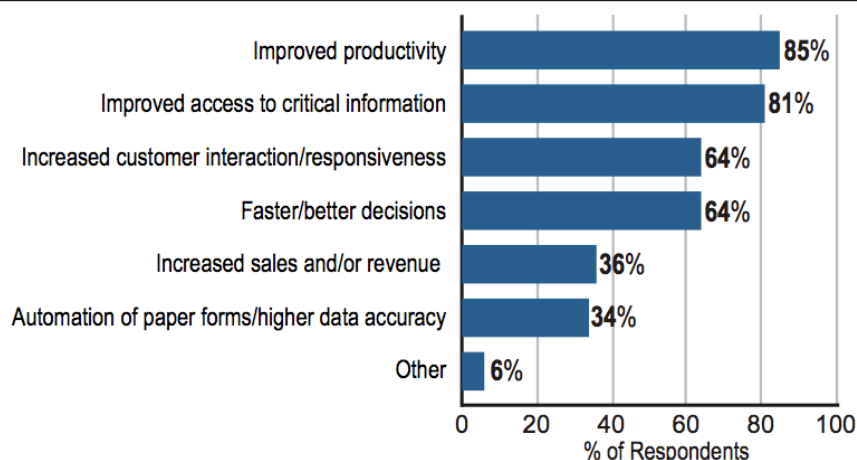


Photograph: Alamy



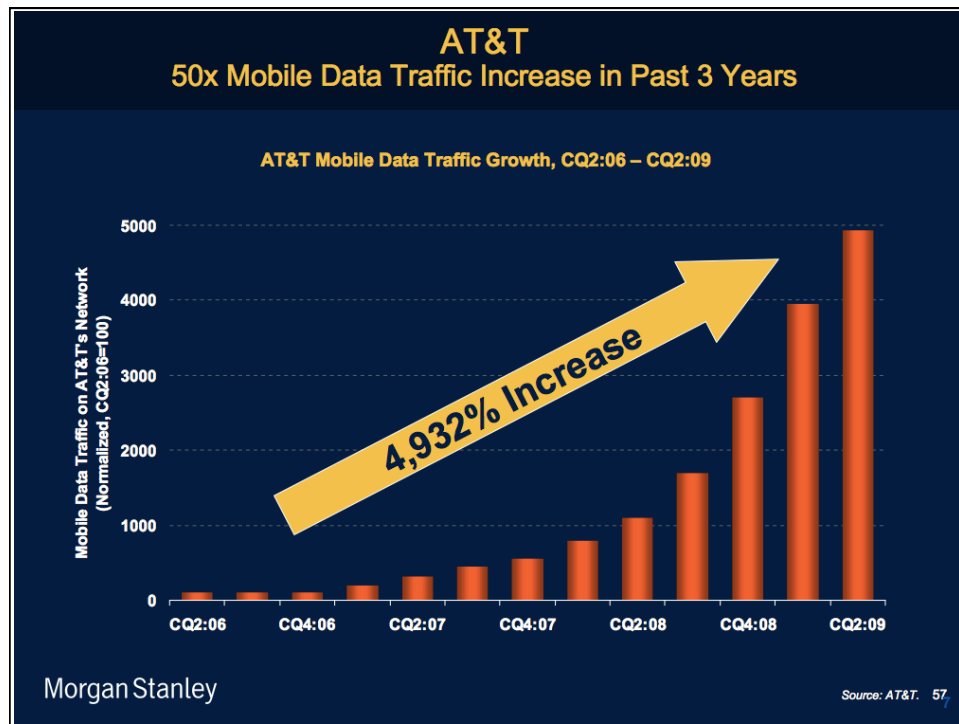
## Benefits Of Mobile Technologies

What are the biggest benefits of mobile technologies to your organization?



Note: Multiple responses allowed.

Data: InformationWeek Research Mobile Computing study of 527 business technology professionals



## Wikipedia Definition

“Learning that happens across locations, or that takes advantage of learning opportunities offered by portable technologies.”



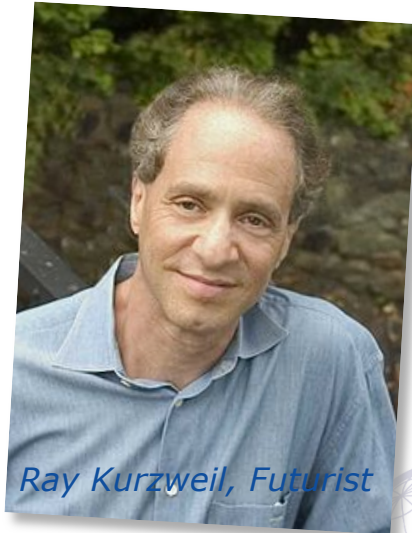




## Misnamed?

“Mobile phones are misnamed. They should be called ‘gateways to all human knowledge’.”

*Handheld Learning 09*



*Ray Kurzweil, Futurist*

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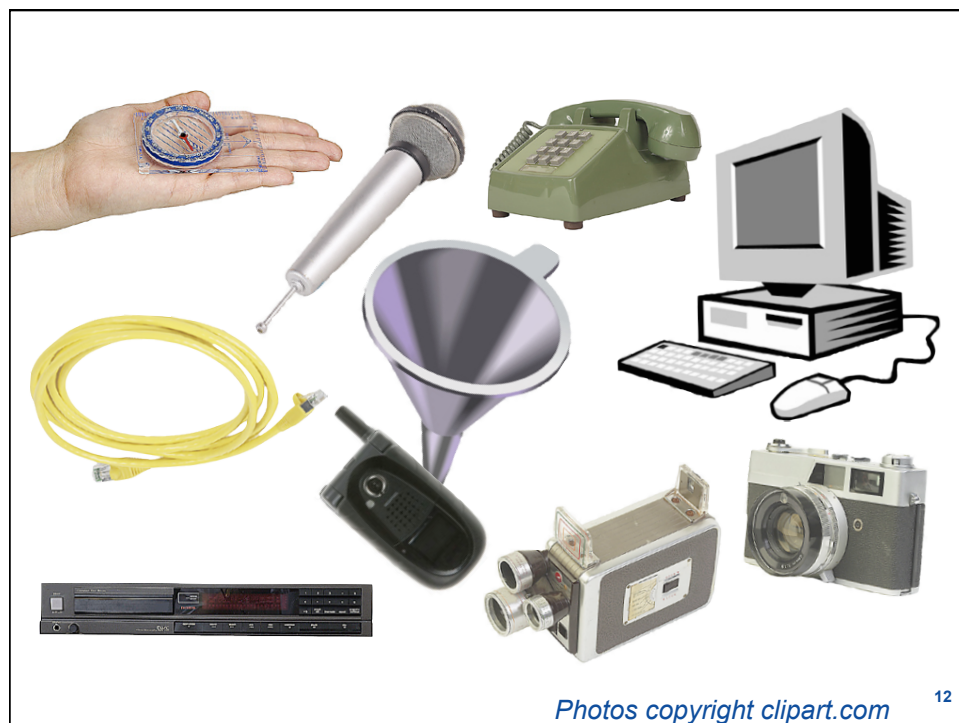
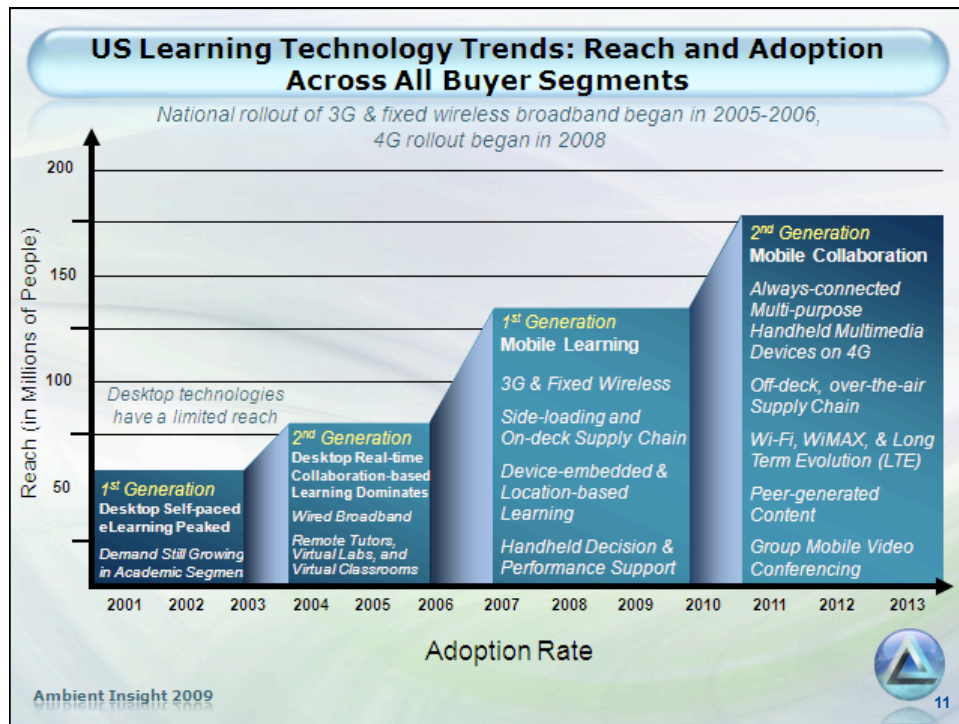
## Five Moments of Learning Needs

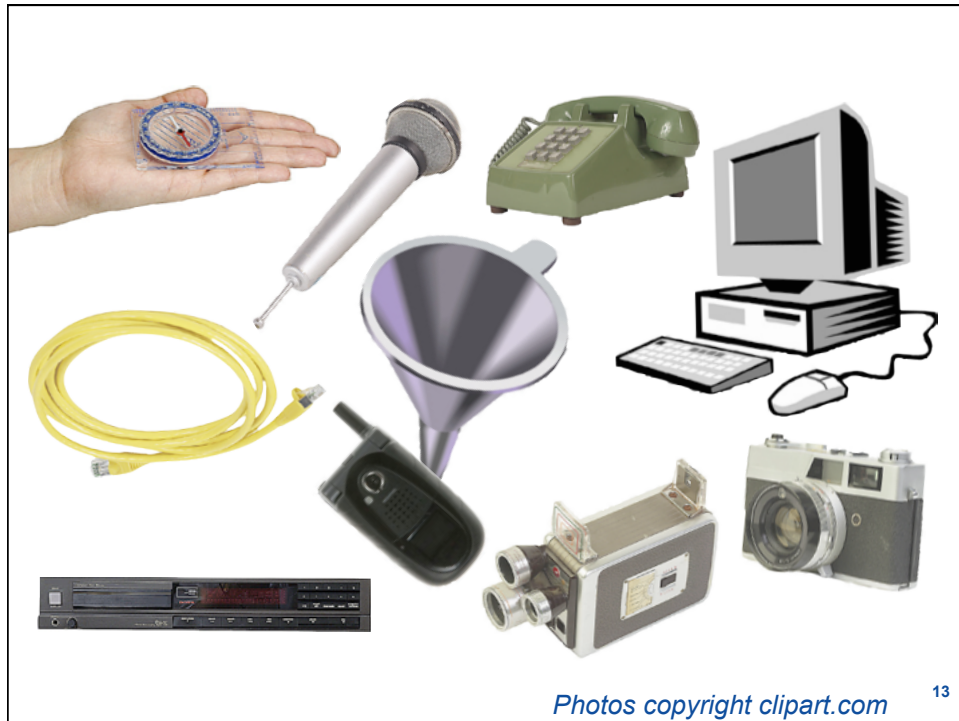
- When learning for the first time
- When wanting to learn more
- When trying to remember
- When things change
- When something goes wrong



*Dr. Conrad Gottfredson*

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## Options Today

### e-Learning (Lite)

#### Performance Support

- On the job support
- Access to information, education, and reference
- Podcasts
- Updates and alerts
- Forms and checklists

#### Collaboration

- Coaching
- Mentoring
- Social networking

### Assessment

- Quizzes
- Tests
- Surveys and polls
- Certification

### Innovation

- Games and simulations
- Location-based
- Augmented reality

### User-Generated Content

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**It is Much More than Just Courses**  
**Mobile Learning Opportunities**

Learning modules

Location specific

Evaluation

Field guide

Quiz

Review/remember

Alerts

Survey

Geo-blogging

Audio recordings

On-demand access

Reporting

Reference

Simulation

Conferencing

Job aid/check list

Decision support

Assignments

Presentations

Contextualized learning

Poll

Just-in-time

Micro learning

Feedback

Video recordings

Note taking

Transcription

Test

Geo-exploration

Reminders

Capture/share/document

Procedures

Updates

Game-based learning

Coaching/mentoring

Organization

Translation

Augmented reality

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**Merrill Lynch**

- Learn when can
- 7 week pilot
- Results 1% higher
- 45% less time
- 100% want more
- 99% felt format supports learning

Get your training on track

Mandated Training Now Available On Your BlackBerry!

You speak. We respond. Introducing ML GoLearn. Training anytime, anywhere - even while you're on the go. Look for the ML GoLearn icon on your BlackBerry. And take your training with you. Download! Contact GMI Learning & Development at gml@ml.com

Scenario 1

Hey Bill, how was your weekend?

Great weekend I had a date with that girl who I was telling you about on Saturday night...and all I can say is

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## Accenture

- SCORM compliance courses
- User satisfaction ratings averaging 4.4 on a 5.0 scale — compared to a 4.0 learner satisfaction rating for the computer-based versions of the same compliance courses

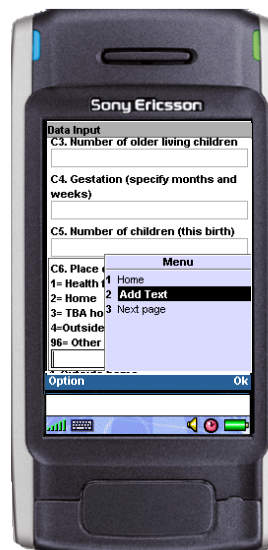


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## Health Management in Developing Countries

- Learning pills
- Newborn
- Data collection

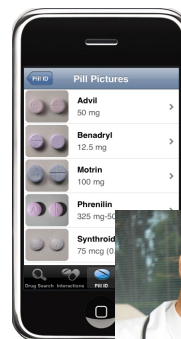


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## Epocrates Mobile CME

- Credits
- Multiple specialties
- Short  
~15 minutes
- Frequent new courses
- Free

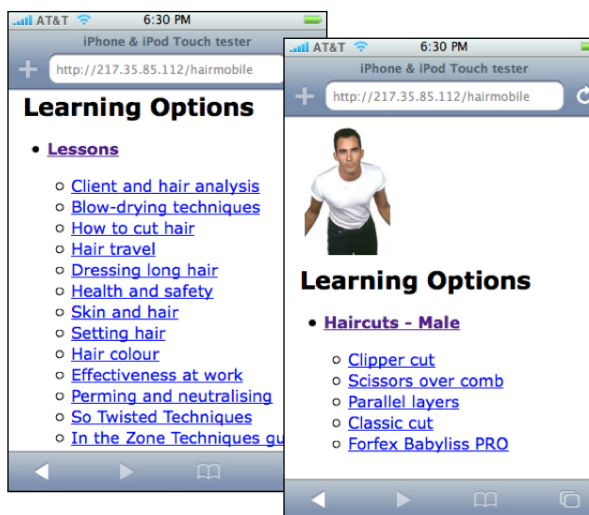


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## Welcome to Hairdressing Training

Voted Britain's  
best example  
of handheld  
learning



<http://htmob.mobi/demo/>

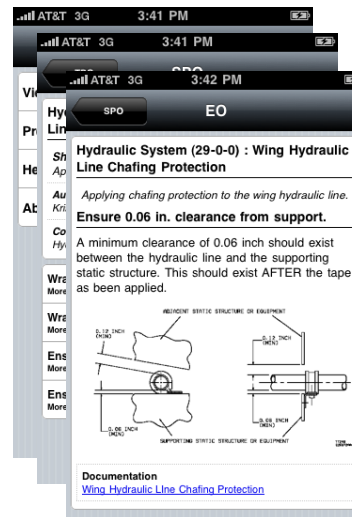
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## Technical Documentation

- Monkeywrench by Hybrid Learning Systems
- Mobile viewer for documents that meet the Darwin Information Type Architecture (DITA)



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## CrisisResponse.mobi

- Pilot demo project
- Existing content
- mobiSiteGalore
- 3 hours development
- 32 pages

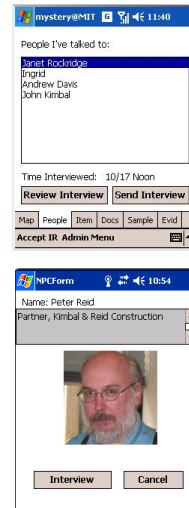
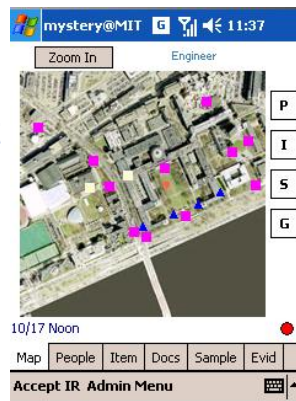


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## Augmented Reality Scientific Role Play Environments

- Game engine decoupled from game content
- Desktop PC-based AR content editor
- Significant collaboration, teamwork, and inquiry-based learning



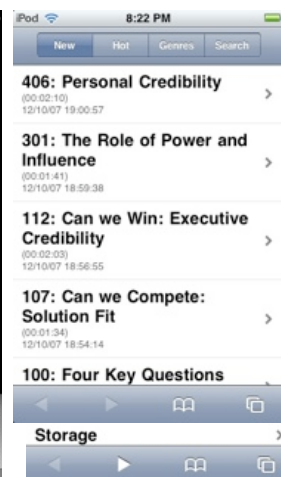
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## Sun Mobile Learning

"[J]ust in time,  
just the right  
size and  
exactly what  
they are  
looking for"

[http://www.youtube.com/watch?v=bakgX\\_wLt4w](http://www.youtube.com/watch?v=bakgX_wLt4w)



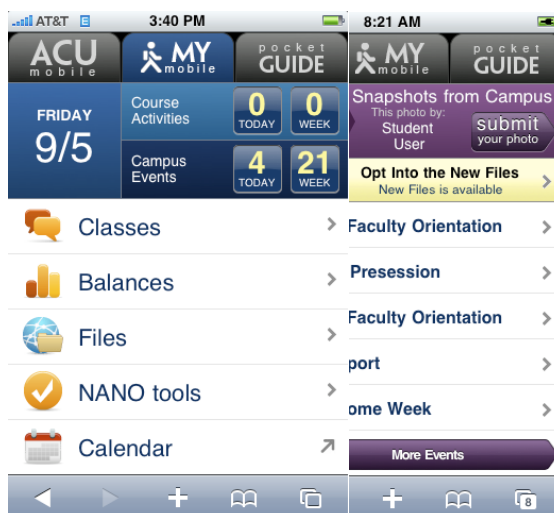
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## Abilene Christian University

- Syllabus
  - "Clicker"
  - Resources - dictionary, thesaurus, calculator, etc.
  - Classroom communicator
  - Podcasting client
  - eBook
  - Internet communicator
  - Course information
  - Notetaking
  - Gradebook/attendance
- <http://m.acu.edu>

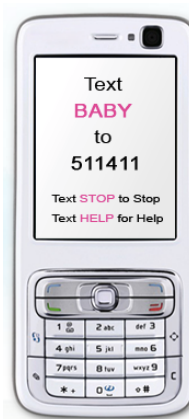


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## text4baby.org

- Free mobile information service
- Promote maternal and child health
- Texting BABY (or BEBE for Spanish) to 511411
- Free SMS text messages each week, timed to their due date or baby's date of birth
- Government, corporations, academic institutions, professional associations, tribal agencies and non-profit organizations

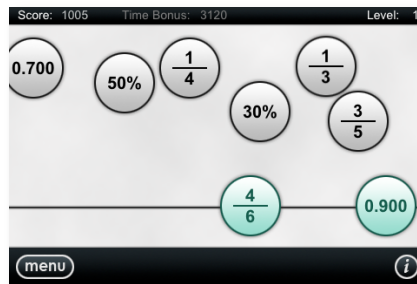


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## Virginia Mobile Learning Apps Development Challenge

- 93% of 6-to-9 year olds live in a home with a cell phone;
- 30% have cell phone.



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## Defense Ammunition Center Munitions Encyclopedia



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## Apple Podcasting and iPods

- Fort Stewart
- TRADOC
- Fort Gordon
- USFK
- Pentagon Channel
- ARNG and PEO STRI
- Language Training

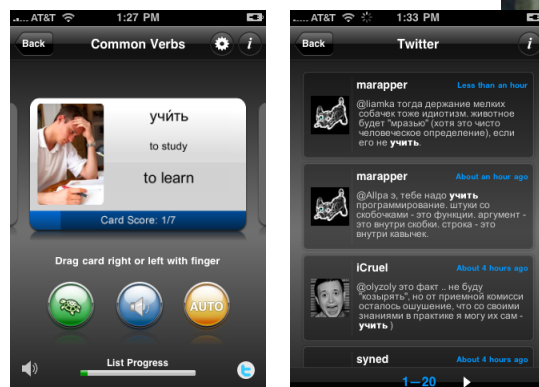


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## Language Learning and Review

- CL-150 community license
- DLI, Navy, Marines, SOCOM

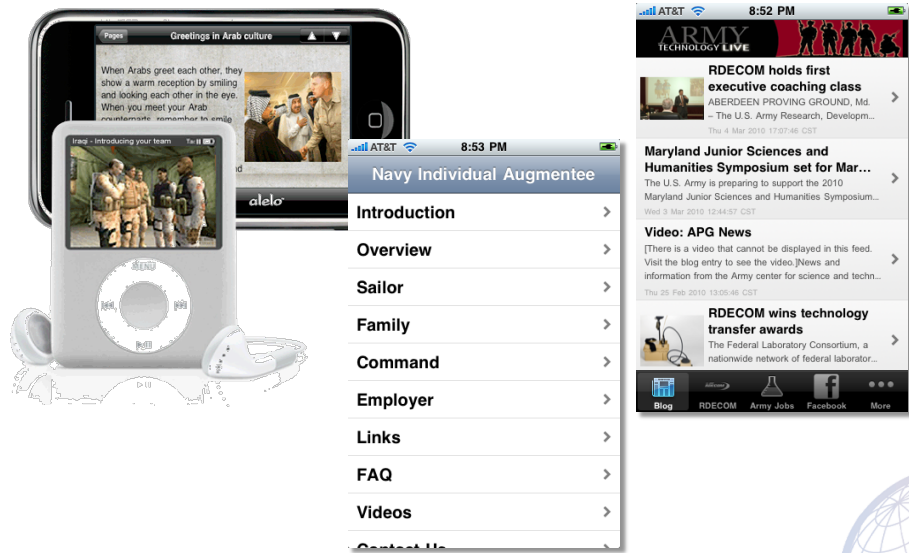


Transparent  
Language

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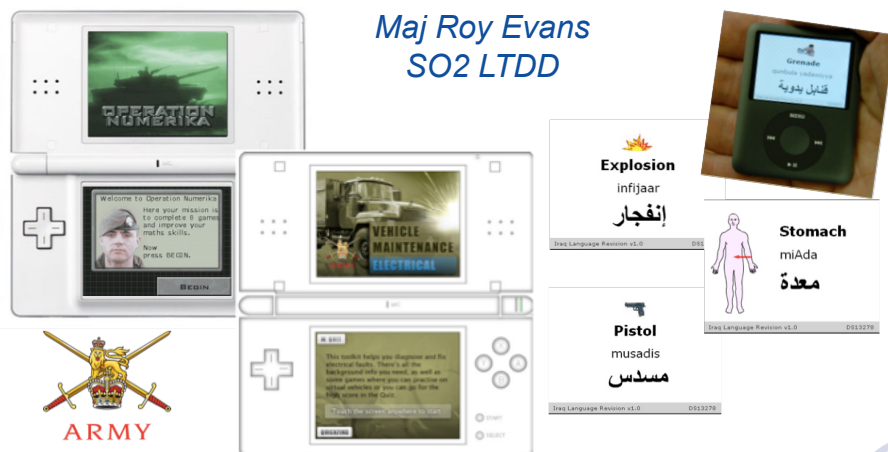
## Other Apps



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## British Mobile Initiatives



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## Directorate of Learning Innovation Canadian Defence Academy

- RCMP Investigator's Toolbox
- BlackBerry
- Desire2Go



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## Advantages of Mobile Learning

- Allows personalization - choose when and where
- Enables reflection
- Informal and formal learning
- Collaborative learning
- Engaging
- Relevant
- Convenient
- Available

*Adapted from James Clay*

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## Challenges

- Generational needs
- Changing culture
- Managing change
- Increasing effectiveness
- Increasing efficiency
- Ruggedized hardware
- Securing access



## Hardware

- It's not about devices, but capabilities
- It's about the experience — not the technology





## Looking Ahead...

- Location (already here)
  - Mobile broadband
  - Recognition
  - Accelerometers
  - Context aware
  - Augmented Reality
  - Machine to machine
  - Near Field Communication
  - Personalization
- Sensors
    - Orientation
    - Heart rate
    - Blood glucose
    - Pulse

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## Interactivity



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## 2D Codes

- City of Manor, Texas
- <http://www.cityofmanor.org/smarttour/>



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## Samsung Show Hands-on and Video at MWC



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## Transparent Devices?



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## Real-time Object Recognition



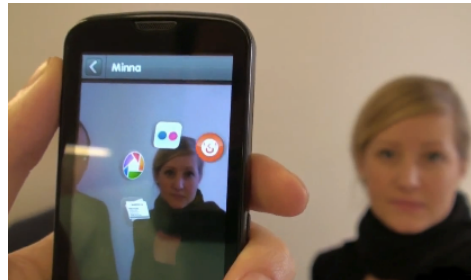
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## 3-D Facial Recognition using Biometrics



Robert Caplin  
for The New York Times



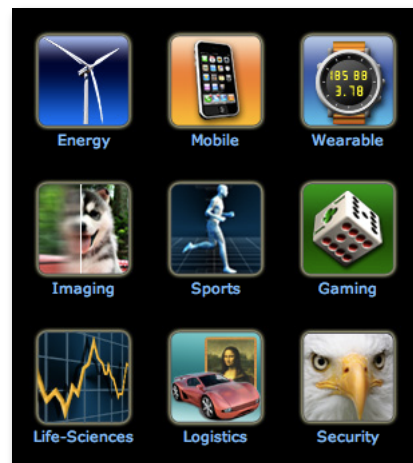
Recognizr The Astonishing Tribe

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## Other Next Generation Solutions

- Context aware
- Location Services
- Sensors
- Accelerometers
- Orientation sensors
- Heart rate
- Blood glucose



<http://fullpower.com>

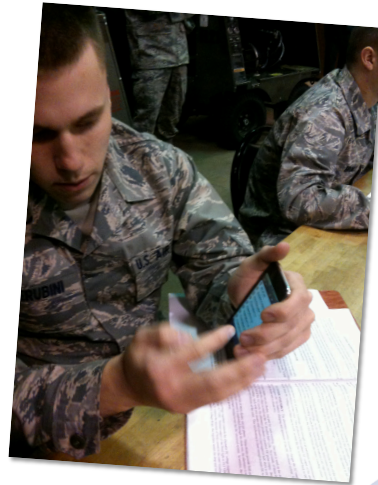
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## Current Activities

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- Tracking Initiatives and Products
- Gathering Documents and Resources
- AETC Workshop and Consulting
- ONR Grants
- ITEC Meetings
- DAU Learning Games
- Industry Presentations and Workshops



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## Where Do I Learn More?

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- ADL Portal
  - <http://www.ADLNet.gov/>
- mlearnopedia
  - <http://mlearnopedia.com/>
  - <http://cc.mlearnopedia.com>

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## Questions or Comments?

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